

SP17



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

RB 92700-10309-042-PO
Job Sheet 185620



Part No: RB 92700-10309-042-PO

Job Qty: 1 ea

Part Name: Tail Blade Wrench (De-Ice)



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 10/31/18

Job Tracking No:

Due Date: 12/14/18

Created By: Patrick Lussier

Type: Stock

Description:

Note: DWG RB 92700-10309-042 Rev.A IPP Rev. A 18.10.29 New issue DP Verify DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Purchasing	3 pcs		12/14/18	0.00	0.00	Purchasing		
110	Packaging	3 pcs		12/14/18	0.00	0.00	Packaging2		
120	QC	3 pcs		12/14/18	0.00	0.00	QC6		
130	Small Fab	3 pcs		12/14/18	0.00	0.30	Small Fab-2		
140	QC	3 pcs		12/14/18	0.00	0.00	QC5		
150	Packaging	3 pcs		12/14/18	0.00	0.00	Packaging3		
160	QC21-FG	3 Ea		12/14/18	0.00	0.00	QC21		

Part Op 100 - Issue P/O: 041341 MANUFACTURE RB 92700-10309-042 AS PER DWG Supplier: ARROW TECH MACHINE

Descriptions: WORKS -Certificate of conformity is required

130 - Re-identify as required.

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
RB 92700-10309-042P	Tail Blade Wrench (De-Ice) Weldment Assembly	3 Ea (1 ea)	100-Purchasing	5139891

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Purchasing	RB 92700-10309-042P	3	0	0

Part Specifications

Specifications could not be found.

Plex 10/31/18 8:38 AM dart.Lussier.Patrick



Container No: S139893



Part: RB 92700 - 10309 - 042

Job No: 185620

Serial No/Batch: S139893

Revision: A

Inspector:

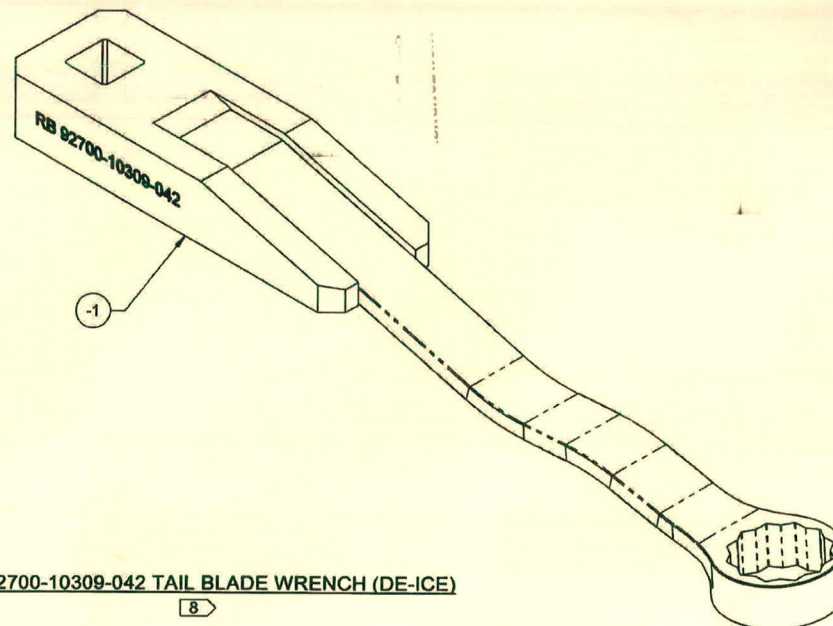
Exp Date:

Instructions:

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Date: 12/21/18

ITEM #	QTY	PART #	PART TITLE
-1	1	RB 92700-10309-042-1	TAIL BLADE WRENCH (DE-ICE) WELDMENT ASSY



RB 92700-10309-042 TAIL BLADE WRENCH (DE-ICE)

NOTES:

- 1) MATERIAL: N/A
- 2) HEAT TREAT: N/A
- 3) FINISH: N/A

- 4) TOLERANCES: X.X = $\pm 0.1"$ / $\pm 1^\circ$
X.XX = $\pm 0.01"$ / $\pm 0.5^\circ$
X.XXX = $\pm 0.005"$ / $\pm 0.1^\circ$
X.XXXX = $\pm 0.0005"$ / $\pm 0.05^\circ$

PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = $\pm 0.005"$

- 5) UNITS: INCHES UNLESS OTHERWISE NOTED

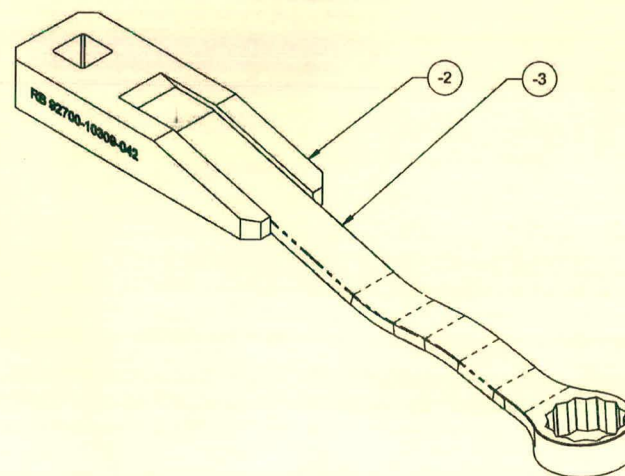
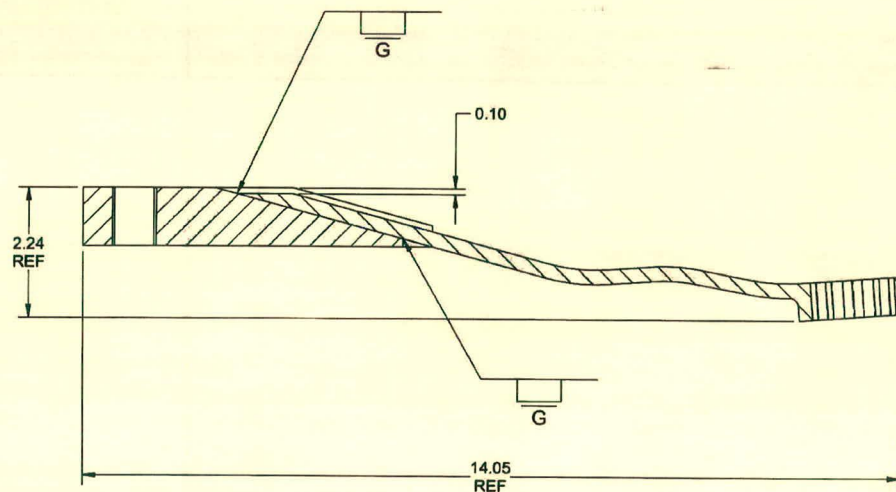
- 6) BREAK SHARP EDGES: N/A

- 7) IDENTIFICATION: N/A

- 8) THE TOOL ASSY MUST BE PACKAGED WITH A DESICCANT BAG INTO A TIGHT FITTING SEALED PLASTIC BAG

A	NEW ISSUE	18-603	KPT
REV.	DESCRIPTION	ECN #	BY
DESIGN	KPT	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	KPT		
CHECKED	VM	TOOL PART #	REV. A
MFG. APPR.	DP	RB 92700-10309-042	SHEET 1 OF 4
APPROVED	VT	TITLE	SCALE
		TAIL BLADE WRENCH (DE-ICE)	NTS
DATE	9/6/2018	COPYRIGHT © 2018 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

ITEM #	QTY	PART #	PART TITLE
-2	1	RB 92700-10309-042-2	HANDLE
-3	1	RB 92700-10309-042-3	WRENCH



RB 92700-10309-042-1 TAIL BLADE WRENCH (DE-ICE) WELDMENT ASSY

8

NOTES:

- 1) MATERIAL: N/A
- 2) HEAT TREAT: N/A
- 3) FINISH: CHROME PLATE PER QQ-C-320 TYPE 2 CLASS 1
- 4) TOLERANCES: X.X = +/- 0.1" / +/- 1"

X.XX = +/- 0.01" / +/- 0.5"

X.XXX = +/- 0.005" / +/- 0.1"

X.XXXX = +/- 0.0005" / +/- 0.05"

PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/- 0.005"

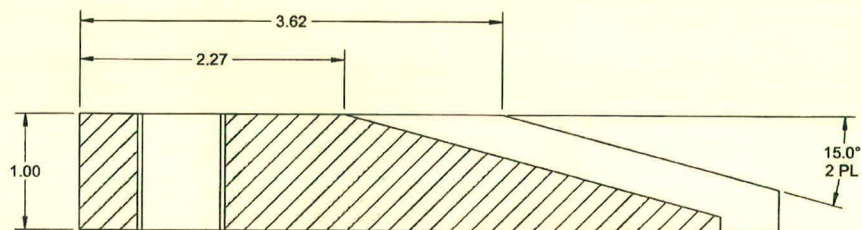
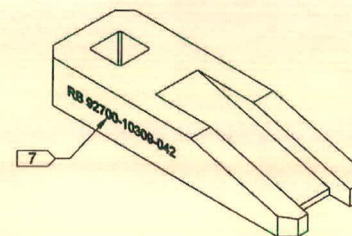
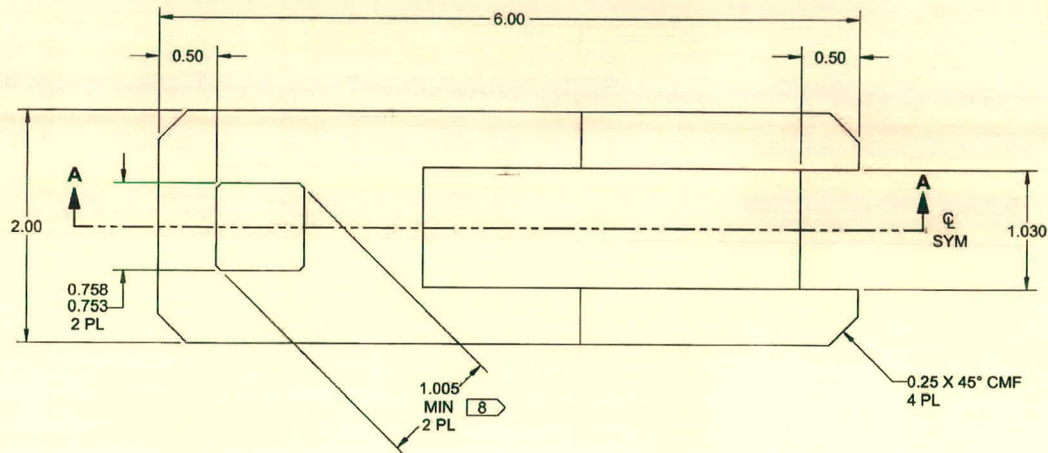
5) UNITS: INCHES UNLESS OTHERWISE NOTED

6) BREAK SHARP EDGES: N/A

7) IDENTIFICATION: N/A

8) BEAD BLAST AFTER WELDING TO REMOVE SCALE PRIOR TO CHROME PLATE

DESIGN	KPT	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	KPT		
CHECKED	VM	TOOL PART #	REV. A
MFG. APPR.	DP	RB 92700-10309-042	SHEET 2 OF 4
APPROVED	VM	TITLE	SCALE
DATE 9/6/2018		TAIL BLADE WRENCH (DE-ICE)	NTS
COPYRIGHT © 2018 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE, OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			



SECTION A-A

RB 92700-10309-042-2 HANDLE

NOTES:

1) MATERIAL: 4140/4142 (28-32 RC)

2) HEAT TREAT: N/A

3) FINISH: N/A

4) TOLERANCES: X.X = +/- 0.1" / +/- 1°

X.XX = +/- 0.01" / +/- 0.5°

X.XXX = +/- 0.005" / +/- 0.1°

X.XXXX = +/- 0.0005" / +/- 0.05°

PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/- 0.005"

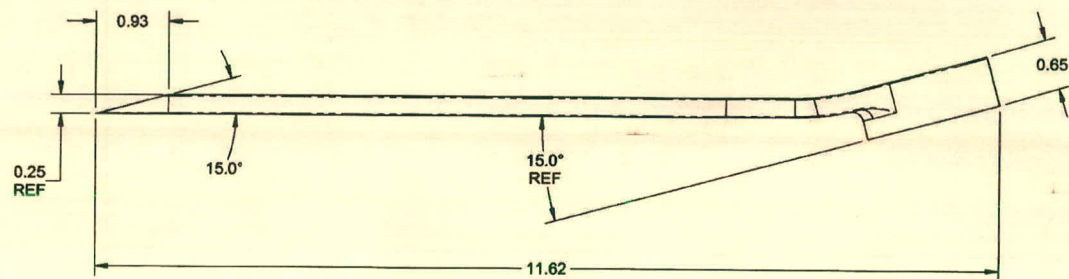
5) UNITS: INCHES UNLESS OTHERWISE NOTED

6) BREAK SHARP EDGES: 0.005" TO 0.010"

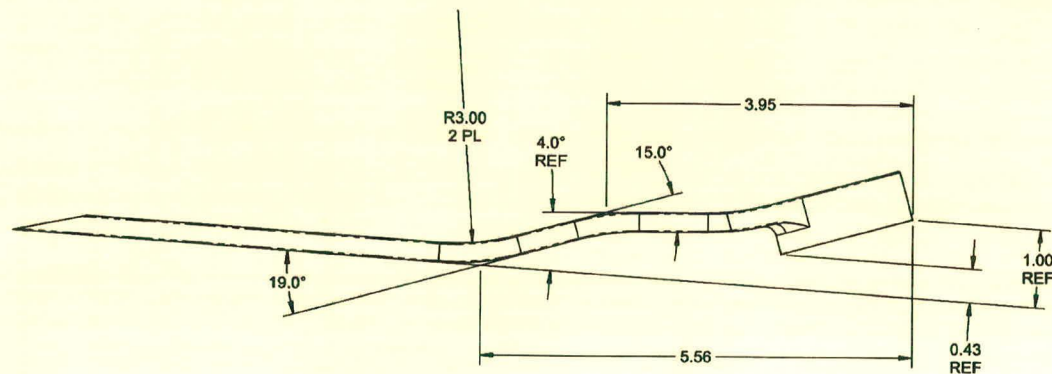
7) IDENTIFICATION: MACHINE ENGRAVE

8) BROACH CORNERS CAN BE RELIEVED WITH 1/16" DRILL DIA. IF NECESSARY

DESIGN	KPT	DART AEROSPACE LTD	
DRAWN	KPT	HAWKESBURY, ONTARIO, CANADA	
CHECKED	VM	TOOL PART #	REV. A
MFG. APPR.	DP	RB 92700-10309-042	SHEET 3 OF 4
APPROVED		TITLE	SCALE
DATE	9/6/2018	TAIL BLADE WRENCH (DE-ICE)	NTS
COPYRIGHT © 2018 BY DART AEROSPACE LTD			
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			



FLAT PATTERN



RB 92700-10309-042-3 WRENCH

8
9
10

NOTES:

- 1) MATERIAL: PROTO#J1240BASD OR EQUIV.
- 2) HEAT TREAT: N/A
- 3) FINISH: N/A
- 4) TOLERANCES: X.X = $\pm 0.1"$ / $\pm 1^\circ$
X.XX = $\pm 0.01"$ / $\pm 0.5^\circ$
X.XXX = $\pm 0.005"$ / $\pm 0.1^\circ$
X.XXXX = $\pm 0.0005"$ / $\pm 0.05^\circ$
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = $\pm 0.005"$
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) BREAK SHARP EDGES: 0.005" TO 0.010"
- 7) IDENTIFICATION: N/A
- 8) BEAD BLAST TO REMOVE FACTORY FINISH AND MARKINGS
- 9) PRE-HEAT PRIOR TO FORMING
- 10) ALL NON-DIMENSIONED FEATURES MUST MAINTAIN A TOLERANCE OF $\pm 0.010"$ PER CAD FILE RB 92700-10309-042-3 REV A.STEP

DESIGN	KPT	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	KPT		
CHECKED	VM	TOOL PART #	REV. A
MFG. APPR.	DP	RB 92700-10309-042	SHEET 4 OF 4
APPROVED	<i>[Signature]</i>	TITLE	SCALE
		TAIL BLADE WRENCH (DE-ICE)	NTS
DATE	9/6/2018	COPYRIGHT © 2018 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	



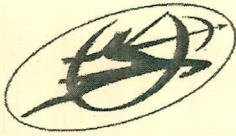
Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO041341**

Items													
Line Item	Job	Part	Supplier Part No	Item No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
8	185619	RB 92700-10350-041-5P			Seal Remover Assembly REV A	Firmed	-	12/21/18	3 Ea	0 Ea	3 Ea	\$1,801.00/Ea	\$5,403.00
Line Item Note SIOP													
9	185620	RB 92700-10309-042P			Tail Blade Wrench (De-Ice) Weldment Assembly REV A	Firmed	-	12/21/18	3 Ea	0 Ea	3 Ea	\$745.00/Ea	\$2,235.00
Line Item Note SIOP													
10	185621	RB 92700-10307-041P			TR Nut Wrench REV A	Firmed	-	12/21/18	2 Ea	0 Ea	2 Ea	\$1,694.00/Ea	\$3,388.00
Line Item Note SIOP													
11	185622	RB 92700-10301-041P			Pitch Beam Puller REV A	Firmed	-	12/21/18	3 Ea	0 Ea	3 Ea	\$0.01/Ea	\$0.03
Line Item Note SIOP													
12	185623	RB 92700-10329-041-4P			Removal Tool Assembly REV A	Firmed	-	12/21/18	3 Ea	0 Ea	3 Ea	\$1,543.00/Ea	\$4,629.00
Line Item Note SIOP													
13	185626	RB 92700-10340-101P			Bearing Spanner Wrench REV A	Firmed	-	12/21/18	3 Ea	0 Ea	3 Ea	\$436.00/Ea	\$1,308.00
Line Item Note SIOP													
14	185627	RB 92700-10305-041-4P			Tail Gear Box & Input Gear Box Seal Installer Assembly REV A	Firmed	-	12/21/18	3 Ea	0 Ea	3 Ea	\$1,180.00/Ea	\$3,540.00
Line Item Note SIOP													
16	185663	RB 92700-10334-042P			Engine Lifting Sling REV A	Firmed	-	12/21/18	3 Ea	0 Ea	3 Ea	\$0.01/Ea	\$0.03
Line Item Note SIOP													

Plex 12/20/18 10:08 AM dart.Lussier.Patrick



**PHGE Machineworks dba
Arrowtech Machineworks**
29751 E Enid Rd. Unit C
Eugene, Oregon 97402
Phone: (541) 780-6938
Fax: (458) 215-4938

Packing Slip

NO. 356

PAGE 1 OF 2

Date: 12/14/2018 ✓
PO Ref: 041341 ✓
Ship via: Fedex Priority

Bill To:
Dart Aerospace
1270 Aberdeen St. Hawkesbury, ON
CANADA K6A 1K7

Ship To:
Dart Aerospace
1271 Aberdeen St. Hawkesbury, ON
CANADA K6A 1K8

Qty	Item	Part No.
3 ✓	SEAL INSTALLATION TOOL	RB 92700-10300-041 - 1
3 ✓	PLATE ASSEMBLY	RB 92700-10303-041 - 4
3 ✓	WRENCH ASSEMBLY	RB 92700-10303-041 - 6
3 ✓	TGB & IGB SEAL INSTALLER ASSEMBLY	RB 92700-10305-041 - 4
2 ✓	TR NUT WRENCH	RB 92700-10307-041 ✓
3 ✓	TAIL BLADE WRENCH (DE-ICE) WELDMENT	RB 92700-10309-042 ✓
3 ✓	TORQUE REACTOR	RB 92700-10314-101 ✓
3 ✓	SIGHT GUAGE REMOVAL TOOL	RB 92700-10328-041 ✓
3 ✓	ENGINE DRIVE SHAFT REMOVAL TOOL ASS	RB 92700-10333-041 ✓
3 ✓	BEARING SPANNER WRENCH	RB 92700-10340-101 ✓
3 ✓	SEAL REMOVAL ASSEMBLY	RB 92700-10350-041 - 5
3 ✓	BEARING ALIGNMENT TOOL	RB 92700-10356-041 ✓
3 ✓	TORQUE ADAPTER	RB 92700-10750-101 ✓
3 ✓	INPUT MODULE WRENCH	RB 92700-10750-102 ✓
3 ✓	RIG PLATE SCREW	RB 92700-10400-041-6 ✓
3 ✓	PIT STOP GUAGE	RB 92700-10400-041-7 ✓
3 ✓	RIG GUAGE PLATE (SPARES)	RB 92700-10400-041-9 ✓

Received by: _____

Packaged by: _____

Checked by: _____

Thank You



**PHGE Machineworks dba
Arrowtech Machineworks**
29751 E Enid Rd. Unit C
Eugene, Oregon 97402
Phone: (541) 780-6938
Fax: (458) 215-4938

Packing Slip

NO. 356

PAGE 2 OF 3

Date: 12/14/2018
PO Ref: 041341
Ship via: Fedex Priority

Bill To:
Dart Aerospace
1270 Aberdeen St. Hawkesbury, ON
CANADA K6A 1K7

Ship To:
Dart Aerospace
1271 Aberdeen St. Hawkesbury, ON
CANADA K6A 1K8

Qty	Item	Part No.
3 ✓	TRS LEFT STOP GUAGE	RB 92700-10400-041-11 ✓
3 ✓	RH MID GUAGE	RB 92700-10400-041-12 ✓
3 ✓	TR MID BLOCK	RB 92700-10400-041-13 ✓
3 ✓	ROLL STOP GUAGE	RB 92700-10400-041-14 ✓
3 ✓	COLL STOP GUAGE	RB 92700-10400-041-16 ✓
3 ✓	LIMITER GUAGE	RB 92700-10400-041-18 ✓
3 ✓	LH MID GUAGE	RB 92700-10400-041-20 ✓
3 ✓	FWD MID GUAGE	RB 92700-10400-041-22 ✓
3 ✓	RH MID GUAGE	RB 92700-10400-041-24 ✓
3 ✓	MIX PIN P / C / R	RB 92700-10400-041-26 ✓
3 ✓	MIX PIN YAW	RB 92700-10400-041-28 ✓
153 ✓	RIG PIN ASSEMBLY	RB 92700-10400-041-30 ✓
3 ✓	BOOST COL LOW	RB 92700-10400-041-33 ✓
3 ✓	3.5" PIN ASSEMBLY	RB 92700-10400-041-36 ✓
3 ✓	9" PIN ASSEMBLY	RB 92700-10400-041-39 ✓
3 ✓	16" PIN ASSEMBLY	RB 92700-10400-041-41 ✓
3 ✓	COCKPIT - RIG PINS <i>Missing CFC</i>	RB 92700-10400-041-43 ✓

Received by: _____

Packaged by: *ADD*

Checked by: *Q.F.*

Thank You



**PHGE Machineworks dba
Arrowtech Machineworks**
29751 E Enid Rd. Unit C
Eugene, Oregon 97402
Phone: (541) 780-6938
Fax: (458) 215-4938

Packing Slip

NO. 356

PAGE 3 OF 3

Date: 12/14/2018
PO Ref: 041341 ✓
Ship via: Fedex Priority

Bill To:
Dart Aerospace
1270 Aberdeen St. Hawkesbury, ON
CANADA K6A 1K7

Ship To:
Dart Aerospace
1271 Aberdeen St. Hawkesbury, ON
CANADA K6A 1K8

Qty	Item	Part No.
3 ✓	5" PIN ASSEMBLY	RB 92700-10400-041-45 ✓
3 12 ✓	BOOST MID PIN	RB 92700-10400-041-49 ✓
3 ✓	ROTOR HEAD - CROSS BAR	RB 92700-10400-041-52 ✓
3 ✓	CYCLIC - RIG BLOCK ASSEMBLY	RB 92700-10400-041-63 ✓
3 ✓	ROTOR HEAD - RIG PLATE	RB 92700-10400-041-64 ✓

Received by: _____

Packaged by: AMR

Checked by: Q.E.

Thank You



ARROW TECH MACHINE WORKS

Certificate of Conformance

Your Purchase Order No: 041341 ✓

Dated: 12/14/2018

Our Order / Job No: 041341-9AWT

Order Qty: 3 ✓

Part Name: TAIL BLADE WRENCH (DE-ICE)

Part Number: RB 92700-10309-042 ✓

Lot Size:N/A

Ship Date: 12/14/2018

We certify that these parts shipped to you are of domestic or international manufacture and conform to all requirements of the Purchase Order. These parts have been manufactured and inspected in accordance with all required specifications, instructions and drawings. Any applicable specifications are listed below:

Drawing Number:RB 92700-10309-042

Rev: A

Material Size and Type: -2/ 4140 STEEL

Material Specifications: STEEL: ASTM A108, ASTM A29

Heat Treatment:-2 (30.0 HRC)

Plating/Finish: CHROME FINISH: QQ-C-320 TYPE 2 CLASS 1

Mercury Contamination: The material used to process this order has not come in contact with mercury or mercury bearing instruments.

Date: 12/17/18

Signed: 

PHGE Machine Works LLC dba Arrow Tech Machine Works
29751 E. Enid Rd. Unit C Eugene, Oregon 97402
Main: (541) 780-6938 | Fax: (458) 215-4938
www.atechmachineworks.com

DAS
68
9-89

Jean-Luc Menard

From: Michael Lee
Sent: Monday, December 31, 2018 12:53 PM
To: Jean-Luc Menard
Cc: Jason Leroux; Linda Lacelle
Subject: Re:

Hey,

Just to confirm, that is a notch on the wrench and not the end of the wrench ?

If it's just a small notch then I'm not too concerned.

Regards,

Mike

Get [Outlook for Android](#)

From: Jean-Luc Menard
Sent: Monday, December 31, 2018 12:43:20 PM
To: Michael Lee
Cc: Jason Leroux; Linda Lacelle
Subject: FW:

Hi Mike,
See attached, is the notch acceptable that Im pointing at?
Let us know asap,
JL

-----Original Message-----

From: Jean-Luc Menard <jmenard@dartaero.com>
Sent: Monday, December 31, 2018 12:41 PM
To: Jean-Luc Menard <jmenard@dartaero.com>
Subject:

